UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,897	01/23/2004	Soichi Wakatsuki	MITPA10.001AUS	7774

20995 7590 07/18/2008

KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER	
MUI, CHRISTINE T	

ART UNIT	PAPER NUMBER
1797	

NOTIFICATION DATE	DELIVERY MODE
07/18/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
eOAPilot@kmob.com

Office Action Summary	Application No.	Applicant(s)	
	10/763,897	WAKATSUKI ET AL.	
	Examiner	Art Unit	
	CHRISTINE T. MUI	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 May 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10,11 and 18-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10,11 and 18-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01 May 2008 has been entered.

Response to Arguments

1. Applicant's arguments filed 01 May 2008 have been fully considered but they are not persuasive.

2. Applicant lists events as to what would happen upon the insertion of the loop and gripping means into the droplet for obtaining micro-crystals and lists reasons why the references in the final action do not embody limitations in the amendment. Applicant asserts that inserting a loop into the droplet moves the micro-crystal. Nowhere in the instant claims does it mention that placing the loop around the micro-crystal will cause it to enter the droplet by affecting the surface tension of the droplet. It is obvious to one having ordinary skill in the art at the time the invention was made to observe a movement of any contents of a droplet up insertion of a foreign object. It is not claimed in the instant claims that the micro-crystal will remain immobile upon insertion of the loop or gripping member for capture. Furthermore, the applicant asserts that upon separating the loop from the droplet, the loop often loses the micro-crystal capture and

the gripping means alone is not sufficient to overcome the surface tension and keep the micro-crystal gripped when being separated from the droplet. The examiner questions whether this is an actual limitation of the method or if this is a property of the material of the loop and gripping or skill in the user or robot and the force or torque used when gripping the micro-crystal from the droplet.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 10-11 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 5,651,574 to Tanikawa (herein referred 'Tanikawa'), and further in view of USP 6,355,217 to Kiefersauer et al (herein referred 'Kiefersauer').

7. Regarding claims 10-11, the reference Tanikawa discloses a micromanipulator with an upper parallel linkage connecting a base member and an opposed middle plate by links, a lower parallel linkage connecting the middle plate and an opposed base plate by links, a first finger attached to the base member of the upper parallel linkage, a second finger attached to the middle plate and is arranged opposite the first finger and drive controllers for effecting relative motions of the fingers in manipulating an object(see abstract). Tanikawa does not disclose a trapping means that comprises a trapping loop for trapping crystals gripped by the gripping means. It is interpreted by the examiner that the gripping means are able to be inserted into a droplet to manipulate an object such as a crystal for examination. Kiefersauer discloses a holding device for particulate material samples that features a carrier block for a loop holder that has a free mounting end for a particular sample, such as ones known from protein crystallography or cryotransferring of samples. The holding device is for particulate material samples especially a sample holder for particles with high fluid content like protein crystals. When obtaining crystal samples from protein crystals, the loop is passed back and forth over the tip so that at least some of the solution is retained in the crystal. According to the device of the holding device, if it is used to mount particles of

organic molecules, substances with a high water content, sacchariferous substances, hydrated or dehydrated substances or polymer polysaccharides, the size of the capillary may be is adapted accordingly. It is interpreted by the examiner that if the capillary may be adapted to mount particles, the loop may also be adapted to change to properly trap crystals of different sizes by inserting the loop into the droplet for capturing the micro-crystal once the top layer of the droplet is removed and place where particles are examined and crystals are extracted from the droplet are placed upon a surface that is a base for examination where it can be displayed and observed. Furthermore, the holding device is not restricted to just use with a vacuum tweezers when a capillary is used but can be also used with other holder devices in which the particulate material sample adheres to the tip of the holding capillary or loop through the effect of holder devices in which the particulate material sample adheres to the tip of the holding capillary through the effect of adsorptive forces, electrical forces or adhesive (see abstract, column 1, lines 5-8, column 2, lines 7-21, 41-67, column 6, line 61-column 7, line 44). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a trapping loop in conjunction with the micromanipulator with fingers in obtaining crystals from a solution so that the crystals can be isolated and properly removed and analyzed without the possibility of contamination from human touch and an ejection device for ejecting droplets of liquid in a particular location for examination.

8. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanikawa and Kiefersauer as applied to claim 10 above.

9. Regarding claims 18-19, the references Tanikawa and Kiefersauer disclose the claimed invention except for specifically gripping the upper side of the loop at the step of inserting the loop. It would have been obvious to one having ordinary skill in the art at the time the invention was made, as a matter of design choice to grip the micro-crystal on the upper side of the loop so that the user or robot can trap the crystal for analysis while the gripping means has gripped the micro-crystal to stabilize its location.

10. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanikawa and Kiefersauer as applied to claim 10 above.

11. Regarding claims 20-21, the references Tanikawa and Kiefersauer disclose the claimed invention except for there is a specific step of separating the gripping member and the loop by lowering the base. It would have been obvious to one having ordinary skill in the art at the time the invention was made to separate the loop and the gripping means from each other after grasping the micro-crystal for examination by lowering the base where the droplet was initially placed and not lifting the loop and gripping means so the risk of moving the micro-crystal is minimized and the possibility of dropping the crystal is eliminated.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Publication No. 2003/0159641 to Sanjoh et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTINE T. MUI whose telephone number is (571)270-3243. The examiner can normally be reached on Monday-Thursday 7-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on (571) 272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CTM

/Walter D. Griffin/
Supervisory Patent Examiner, Art Unit 1797